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NELSON, MICHAEL E				
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1794				
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11/10/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/538,023

Applicant(s)

IWAKUMA ET AL.

Examiner

MICHAEL E. NELSON

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-608/609)
Paper No(s)/Mail Date 02/04/2008, 05/01/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Claims

1. In response to Applicant's reply dated 08/19/2008, claims 1-17 are pending.

Claims 1, 5-6 have been amended. Claim 17 is new.

Election/Restrictions

2. Applicant's election of the structure wherein X_3 is Nitrogen (group 2), and X_1 - X_2 and X_4 - X_8 are carbon (group 1), and where R_1 - R_8 are L, wherein L is hydrogen or linear or branched alkyl, and R_9 is -L-Y, where L is substituted or unsubstituted arylene (group 11), and Y is substituted or unsubstituted heterocyclic (group 17) in the reply filed on 01/02/2008 is confirmed. The amended claims are still examined in light of the elected species.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5. Claim 1 has been amended to include the proviso "that when R₉ comprises two or more groups selected from condensed heterocyclic groups or tertiary amino groups, R₉ comprises at least one heterocyclic group selected from the group consisting of" followed by a group of specific heterocycles.

6. However, the original disclosure does not support the amendment. The specification does not distinguish compounds which have two or more groups selected from condensed heterocycles or tertiary amino groups from other substituents. Further, the disclosure does not disclose the specific heterocyclic group in general, only in combination with specific carboline structures, and specific linking groups in the specific examples shown on pages 12-21.

7. New claim 17 claims the generic carboline structure of formula (1) where substituent R₉ **comprises** one of a list of partial structures. However, the original disclosure does not support the scope of the claim as written, since the partial structures are only found in the specific examples shown on pages 12-21, and only in combination with specific linking groups (all of which are aromatic), and in combination with specific carboline structures. Therefore the disclosure does not support the combination of a generic carboline with the partial structures for R₉, or the undefined linkage between the carboline and the claimed partial structure.

Claim Rejections - 35 USC § 103

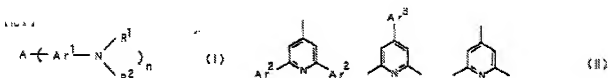
8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1794

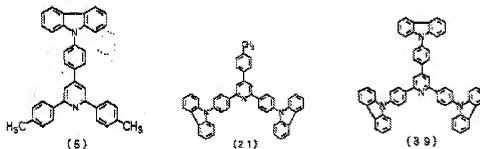
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-4, 6-10, 12-13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al. (JP 2000169448) in view of Noguchi et al. (EP 517542).

10. Concerning claims 1-4, Fujino et al. describes materials for organic electroluminescent devices having the general formula (I) shown below, where A is shown by formula (II) shown below [0013], where Ar^2 and Ar^3 are aryl groups, [0013] while Ar^1 are also aryl groups [0014], and where R^1 and R^2 include aryl groups, such a phenyl, and heteroaryl groups such as pyridyl, and where R^1 and R^2 combine to form a ring. [0016]

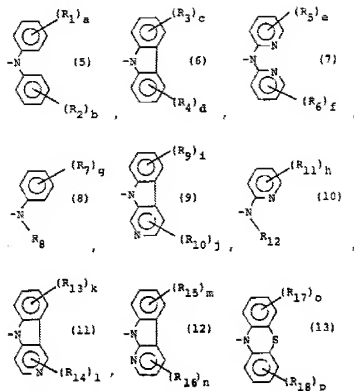


11. Fujino et al. disclose examples of ring compounds, such as the carbazole structure. Fujino et al. show examples of compounds such as the compounds shown below. (page 9-14)

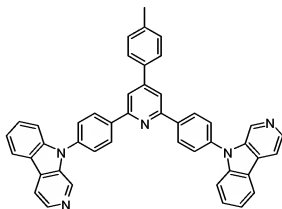


12. Concerning claims 9-10 and 12-13, Fujino et al. describe organic electroluminescent devices comprising an anode (1) and a negative pole (cathode, 4), and an organic hole injection transporting bed (2) and an organic luminous layer (3). (see drawing 1, and [0069] The material described above is useful in the organic hole injection transporting bed (hole injection or hole transport layer, per claim 12) [0069] and/or in the luminous layer (per claim 10). [0070] Fujino et al. further describe devices where the material is used as a charge transport material (7) in combination with an organic luminescent material (6) (an organic host material, per claim 13). [0072]
13. Fujino et al. are silent on compounds containing a carboline ring, though they do disclose that R¹ and R² may be phenyl or pyridyl, and may combine to form a ring.
14. Noguchi et al. describes charge transporting material for organic electroluminescent devices including the partial structures shown below.

Art Unit: 1794



15. The structures described by Noguchi et al. show the arylamine structures where R^1 and R^2 are phenyl, pyridyl, and where the two subunits combine to form a ring, including the β -carboline ring (structure (9) above).
16. An example of such a compound is shown below.



17. The structure shown has the structure L-Y, where L is phenyl (aryl) and Y is substituted pyridyl (heteroaryl) (per claim 2), or where Y is β -carbolinyl (per claim 6) and L is triphenylpyridyl. Only one of X₁ to X₈ is a nitrogen atom (per claim 3), specifically X₃ (per claim 4). The compound includes the diphenyl pyridine substructure (per claim 17).

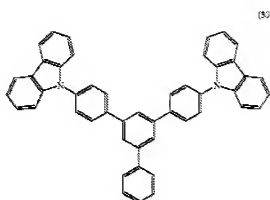
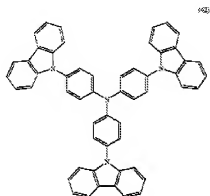
18. Concerning claims 7-8, the compound shown is nearly identical to Applicant's compound (96) shown on page 19. It would be reasonable therefore to predict that the singlet and triplet energy gap meet the ranges required.

19. Given this teaching, and the fact that the carbazole, arylamine, and carboline are shown to be functionally equivalent in organic charge transporting materials, it would have been obvious to one of ordinary skill to use the carboline ring as described by Noguchi et al. for the arylamine or carbazole ring described by Fujino et al., and to predict that the compounds would retain their function as charge transporting materials in organic electroluminescent devices.

20. Claims 1-4, 6-10, 13, 15-17, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosokawa (US 2002/0045061) in view of Noguchi et al. (EP 517542).

21. Concerning claims 1-4, Hosokawa describes materials for organic electroluminescent devices comprising carbazole derivatives with high glass transition temperatures as host materials for phosphorescent light emitting materials. (abstract)

22. Hosokawa describes several classes of materials, including the specific structures shown below.

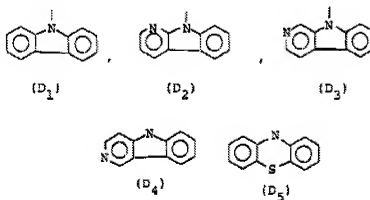


23. Concerning claims 9-10 and 13, 15-16, Hosokawa describes organic light emitting devices comprising an anode and a cathode, and an organic luminescence layer (light emitting layer, per claim 10) [0052] comprising the carbazole derivative with the high glass transition temperature, and a phosphorescent dopant (per claim 15), where the carbazole derivative is a host material (per claim 13). [0055]-[0056], [0094]-[0096] Hosokawa et al. discloses that by selecting a material with a triplet value of $22,500\text{ cm}^{-1}$ or more, blue luminescence can be obtained easily (per claim 16). [0068]

24. Concerning claims 7-8, Hosokawa discloses that the triplet energy is at least $21,000\text{ cm}^{-1}$ and that a triplet energy of greater than $22,500\text{ cm}^{-1}$ or more is required for blue luminescence. From the conversion of $1\text{ eV} = 8065.7\text{ cm}^{-1}$, the triplet energy of the materials can be calculated as at least 2.65 (per claim 7), but preferably 2.79 eV for blue emission. Since the singlet energy gap is greater than the triplet energy gap, it would be reasonable to predict that the singlet energy is at least 2.8 eV based on the triplet energy (per claim 8).

25. Hosokawa is silent on materials having a carboline structure instead of a carbazole structure.

26. Noguchi et al. describes materials having high thermal stability (high glass transition temperatures) having substituents specifically including carbazoles and carboline structures as shown below (see page 7)

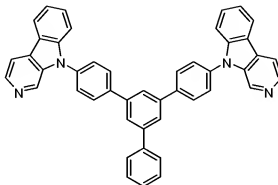


27. Noguchi et al. disclose that these materials are hole transporting and useful in organic electroluminescent devices having a luminous layer containing a luminous material and hole transport material. (see page 3, lines 37-42)

28. Noguchi et al. disclose materials identical to the compound (42) (shown above) disclosed by Hosokawa (see structure (B₁) on page 6, where A is one of the structures D₁-D₅) shown above.

29. Given the teaching by Hosokawa of materials having a high glass transition temperature having a carbazole substituent, and the teaching by Noguchi et al. of the equivalent between the carbazole substituent and the carboline substituent in materials for organic electroluminescence devices, it would have been obvious to one of ordinary skill to use the carboline substituent in place of the carbazole substituent in the compounds described by Hosokawa, specifically including materials having the

structure (30) shown above. For illustration purposes, the analogous material is shown below.

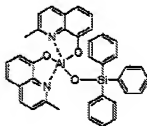


30. Concerning claims 1-4, 6 and 17, the material shown above meets the requirements of the elected species where Y is heterocyclic (specifically β -carbolinyl, per claim 6), and L is 1,3,5 triphenylbenzene. The material has a single heterocyclic group, and one of X_1 to X_8 (per claim 3), specifically X_3 (per claim 4) is a nitrogen and the others represent carbon atoms. The structure further comprises the 3,5-diphenylbenzene substructure required by Applicant's claim 17.

31. Concerning claims 7-8, given the similarity to materials describe in the specification, and the information concerning the energy gap of the triplet state disclosed by Hosokawa, it would be reasonable to predict that the material shown would meet the requirements of the triplet and singlet energy gap.

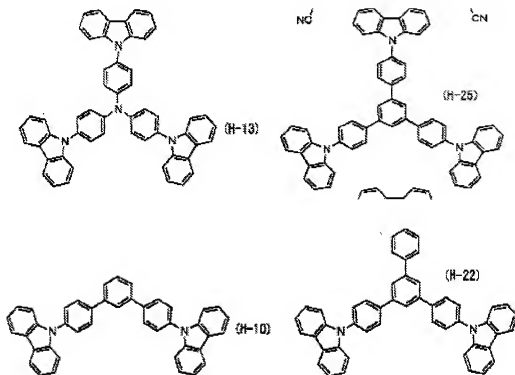
32. Claims 1-4, 6-9, 11, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (JP 2002-008860) (Sato '860) in view of Sato et al. (JP 2003-031371) (Sato '371) and Noguchi et al. (EP 517542) with evidence supplied by Thelakkat et al. (Polymers for Advanced Technologies, vol. 9, pp. 429-442, 1998).

33. Concerning claims 9, 11, and 15, (Sato '860) describe an organic electroluminescent element with a pair of electrodes (2 and 8) and a light emitting layer (5) comprising a phosphorescent light emitting material and phenylcarbazole host. (Fig 1, abstract) (per claims 9 and 15) The device further includes a hole blocking layer (electron transporting layer, per claim 11) (6) comprising the material shown below. (See examples, [0083]) Sato '860 discloses that the devices are useful in flat panel displays, such as OA computers and flat TV. [0094]



30

34. Sato '860 is silent on the use of other materials for the hole blocking layer.
35. Sato '371 describe the use of a hole blocking layer to convey efficiently the electron (electron transporting layer) from the cathode, and prevent the electron hole from passing through the luminous layer [0009], and that the use of N-phenyl carbazole type materials as a hole blocking material produce devices with high color purity and excellent in driving stability [0018]
36. Sato '371 discloses materials such as the ones shown below as useful for the hole blocking layer.

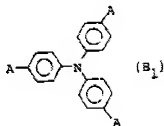


37. Sato '371 discloses the use of the material as a hole blocking material when the material has an ionization potential 0.1 eV or greater than the ionization potential of a host material in the light emitting layer. [0018] Sato '371 compare the use of the carbazole containing hole blocking material with the same hole blocking materials described by Sato '860 (See comparative example 2, [0124]-[126]) and disclose that the device has a large brightness and lacks driving stability compared to the carbazole material as hole blocking material. [0125]

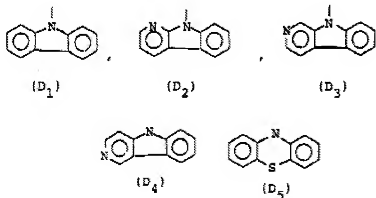
38. Given this teaching, it would have been obvious to one of ordinary skill in the art to use the materials described by Sato '371 in a hole blocking layer between the light emitting layer and the cathode of a device described by Sato '860 for the purpose of reducing the brightness degradation and improving the driving stability.

39. Sato '371 are silent on the use of carboline analogs of the carbazole materials in the hole blocking layer, but recognize that the ionization potential of the hole blocking material must be greater than the ionization potential of the host material in the light emitting layer.

40. Noguchi et al. describes charge transport materials for electroluminescent devices, specifically materials having the general structures shown below. (page 6) Noguchi et al. discloses the use of the charge transport materials in combination with a luminescent material in the light emitting layer. (abstract Page 3, lines 37-38)



Wherein A represents one of the groups represented by the structures shown below.



41. It is clear that Sato '371 and Noguchi et al. describe the same carbazole containing material, and that Noguchi et al. further discloses carboline analogs suitable

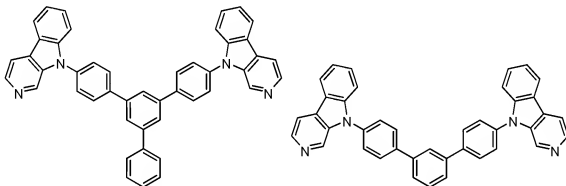
for use in electroluminescent devices. Given the structural similarity between the compounds, and the fact that carboline structures are described by Noguchi et al. equivalently with carbazole structures, it would be reasonable to predict that the materials would function in the same manner as hole blocking materials.

42. Thelakkat et al. teach that compounds which are suitable as electron transport/hole-blocking materials, and for blocking the flow of holes towards the cathode, the molecule should have a low HOMO level, (particularly when compared with the adjacent hole-transporting/host layer) which inhibits hole transport. Thelakkat et al. teach that potential candidates as electron transport materials are π -electron deficient nitrogen or oxygen containing heterocycles, including pyridines (page 430).

43. Since the compounds described by Noguchi et al. can essentially be considered to be pyridine analogs of carbazole, and compared with the structure of the closely related carbazoles (also described by Noguchi et al. and Sato '371), it is apparent that the azacarbazole compounds are more π -electron deficient than carbazole (resulting in a higher ionization potential), and would therefore be an obvious candidate for use in a hole blocking layer, since the hole transport capability would be reasonably predicted to be less than the adjacent carbazole containing layer, due to the presence of extra nitrogen atoms in the heterocyclic structure. It would therefore have been obvious to one of ordinary skill in the art to use the azacarbazole compounds described by Noguchi et al. and azacarbazole analogs of the materials described by Sato '371 in the hole blocking layer in a device as described by Sato '860, since they would be predicted

have increased stability, as described by Noguchi et al. and Sato '371, and have a higher ionization potential than the adjacent host material, as required by Sato '371.

44. For clarity, an example of the material described by Noguchi et al. is shown below.



45. Concerning claims 1-4, 6 and 17, the material shown above meets the requirements of the elected species where Y is heterocyclic (specifically β -carbolinyl, per claim 6), and L is 1,3,5 triphenylbenzene or 3,5-diphenylbenzene. The material has a single heterocyclic group, and one of X_1 to X_8 (per claim 3), specifically X_3 (per claim 4) is a nitrogen and the others represent carbon atoms. The structure further comprises the 3,5-diphenylbenzene substructure required by Applicant's claim 17.

46. Concerning claims 7-8, given the similarity to materials describe in the specification, and the information concerning the energy gap of the triplet state disclosed by Hosokawa, it would be reasonable to predict that the material shown would meet the requirements of the triplet and singlet energy gap.

47. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al. (JP 2000169448) in view of Noguchi et al. (EP 517542) as applied to claim 9 above, and further in view of Lee et al. (6,351,067).

48. Concerning claim 14, Fujino et al. describe the organic electroluminescent device discussed above, but are silent on the use of an inorganic compound layer between at least one of the electrodes and the organic film layer.

49. Lee et al. described organic electroluminescent devices with improved luminescent efficiency by the inclusion of an inorganic buffer layer in the hole injecting or electron injecting regions. (abstract)

50. Given this teaching, it would have been obvious to one of ordinary skill in the art to use the inorganic buffer layer, as described by Lee et al. between the thin film layer and the electrode of the device described by Fujino et al., for the purpose of improving the luminescent efficiency of the device.

51. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hosokawa (US 2002/0045061) and Noguchi et al. (EP 517542) as applied to claim 9 above, and further in view of Lee et al. (6,351,067).

52. Concerning claim 14, Hosokawa describes the organic electroluminescent device discussed above, but are silent on the use of an inorganic compound layer between at least one of the electrodes and the organic film layer.

53. Lee et al. described organic electroluminescent devices with improved luminescent efficiency by the inclusion of an inorganic buffer layer in the hole injecting or electron injecting regions. (abstract)

54. Given this teaching, it would have been obvious to one of ordinary skill in the art to use the inorganic buffer layer, as described by Lee et al. between the thin film layer and the electrode of the device described by Hosokawa for the purpose of improving the luminescent efficiency of the device.

55. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (JP 2002-008860) (Sato '860), Sato et al. (JP 2003-031371) (Sato '371) and Noguchi et al. (EP 517542) with evidence supplied by Thelakkat et al. (Polymers for Advanced Technologies, vol. 9, pp. 429-442, 1998) as applied to claim 9 above, and further in view of Lee et al. (6,351,067).

56. Concerning claim 14, Sato '860 describe the organic electroluminescent device discussed above, but are silent on the use of an inorganic compound layer between at least on of the electrodes and the organic film layer.

57. Lee et al. described organic electroluminescent devices with improved luminescent efficiency by the inclusion of an inorganic buffer layer in the hole injecting or electron injecting regions. (abstract)

58. Given this teaching, it would have been obvious to one of ordinary skill in the art to use the inorganic buffer layer, as described by Lee et al. between the thin film layer

and the electrode of the device described by Sato '860, for the purpose of improving the luminescent efficiency of the device.

Double Patenting

59. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

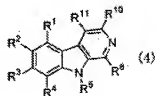
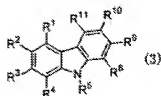
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).
60.

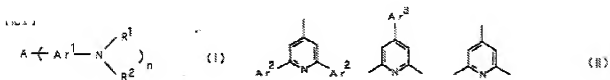
61. Claims 9-13, and 15 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3 and 11 of copending Application No. 11/480463 in view of Fujino et al. (JP 2000169448).

Although the conflicting claims are not identical, they are not patentably distinct from each other because Application No. 11/480463 claims an organic electroluminescent device comprising an anode, a cathode and a thin film layer comprising at least one layer, where at least one of the layers comprises a compound of the structure shown

below (claim 3), at least one layer of which comprises a host for a phosphorescent dopant. Any of the layers can comprise the compound shown below. (claim 1) The layers include a light emitting layer (layer 2) (claim 11), and the first and third contact the emitting layer (being therefore either a hole transporting layer, or an electron transporting layer, depending on which side of the emitting layer each of the other two layers is deposited. The material for the electroluminescent device includes at least one of the structures shown below.



62. The claims are silent on a material having the structure L-Y where L is aryl, and Y is heterocyclic, as required by the elected species of the present application. Fujino et al. describes materials for organic electroluminescent devices having the general formula (I) shown below, where A is shown by formula (II) shown below [0013], where Ar² and Ar³ are aryl groups, [0013] while Ar¹ are also aryl groups [0014], and where R¹ and R² include aryl groups, such as a phenyl, and heteroaryl groups such as pyridyl, and where R¹ and R² combine to form a ring. [0016]



63. Given the teaching of the claims of the equivalence between the carbazole and the carboline structure, it would have been obvious to one of ordinary skill to use the analogous material described by Fujino et al, in the organic electroluminescence device

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 9-13, and 15 are directed to an invention not patentably distinct from claims 1 and 3 of commonly assigned Application No. 11/480463. See discussion above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned Application No. 11/480463, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Response to Arguments

64. The references cited on the information disclosure statement dates 02/04/2008 have been considered. A revised copy of the IDS form is included in this action.

65. Applicant argues that the material described in amended claim 1 is not taught by Noguchi et al. However, Noguchi et al. describe the equivalent use of carbazole and carboline substituents in material for organic electroluminescent devices. As discussed above, other materials would have been obvious given this teaching.

Conclusion

66. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL E. NELSON whose telephone number is (571)270-3453. The examiner can normally be reached on M-F 7:30am-5:00pm EST (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael E. Nelson
Examiner
Art Unit 1794

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794